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THE LEADER VERB AS A MECHANISM OF MORPHOLOGICAL CHANGE
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A leader word serves as a model for morphological change in other words that adapt themselves to it. By studying an example of a leader word, we can develop criteria for identifying other leader elements in language change. To clarify the definition, let us look at some leader words. Examples of leader verbs include OSp. digo 'I say', dizes 'you say' (< Latin DICŌ, DICĒS) as the model for yago 'I lie', yazes 'you lie' (< Latin JACEŌ, JACĒS) (Malkiel 1974: 309) and for fago 'I make', fazes 'you make' (< Latin FACIŌ, FACIS) (Malkiel 1968b: 41). The leader verb digo 'I say' shows the regular phonetic development from Latin, while the other verbs lack the regular reflexes but have been analogically changed to resemble the verb digo.

Leader words are found in the syntax of idioms as well as in the morphology of verbs. Thus, the expression hot and cold, introduced by hot and..., gave rise to such idioms as hot and bothered, hot and heavy, hot and spicy, etc. (Malkiel 1968a: 347). Within our own lifetimes, we have seen the proliferation of words prefixed by mini- on the model of miniskirt--for example, minicourse, minibus, and minicomputer. More recently, we have seen the formation of workaholic, modeled on the leader word alcoholic. And who among us has not tasted a cheeseburger, based on the earlier hamburger? Instead of looking at large numbers of leader words, however, we shall examine the single leader word that triggered the spread of -ESC-, the Latin inchoative suffix meaning 'begin to' or 'become'.

The original Proto-Indo-European suffix *-sk- did not have inchoative meaning, for the earliest attested languages show a variety of meanings for the affix. According to Berrettoni (1971: 94-99), the Tocharian reflex is causative, the Sanskrit simply marks the present in contrast to the aorist and perfect stems, the Avestan reflex is inchoative, the Hittite is iterative, and the Ionic Greek is iterative-intensive. Moreover, Kurylowicz (1964: 106-7) states that the corresponding Middle Iranian suffix is intensive-passive, and the Armenian is aorist. Such an overview demonstrates that there was no obvious inchoative meaning in the original *-sk- suffix, so that the semantic development of the inchoative -ESC- must have been internal to Latin.

How did the -ESC- suffix take on the inchoative meaning in Latin? It was through reanalysis of a root having a related meaning and a suffix consisting of

-SC-. The verb CRĒ-SC-Ō 'I grow' has a meaning that can be paraphrased as 'I become larger' or 'I begin to be larger'. The suffix -SC- marked the present stem of CRĒ-SC-Ō to help distinguish it from the perfect CRĒ-VI 'I grew'. According to Kent (1946: 110), the inchoative meaning shifted from the root to the suffix in the following process:

CRĒ- + -SC- + -Ō → CR- + -ĒSC- + -Ō
 [INCHOATIVE] [INCHOATIVE]

The inchoative meaning has thus moved from the root to the suffix, which has also taken on the vowel to yield -ĒSC-. Although the preceding argument is rejected by Leumann (1963: 314), who claims that the leader verb for the inchoative suffix cannot be found, the data of this paper support the theory of Kent against the skepticism of Leumann.

Let us examine a chronological list of the earliest attested Latin inchoatives. These forms, which show different vowels before -SC-, were attested before 150 BC; they are found in the Latin etymological dictionary of Walde-Hofmann (1954-65), and the English glosses come from Andrews (1907):

- 204 BC NĀSCI 'to be born'
 198 BC AUGĒSCERE 'to begin to grow'
 LIQUĒSCERE 'to become fluid, melt'
 184 BC IN-NĀSCI 'to be born in'
 HĪSCERE 'to open, gape, yawn'
 DĒ-FETĪSCI 'to become tired'
 OB-STUPĒSCERE 'to become senseless'
 PER-SENTĪSCERE 'to perceive clearly'
 CON-TICĒSCERE 'to become still, cease speaking'
 FERVĒSCERE 'to become boiling hot, begin to boil'
 DĒ-LIQUĒSCERE 'to melt away'
 FRUNĪSCI 'to enjoy'
 A-GNŌSCERE 'to know a person or thing well'
 PER-CO-GNŌSCERE 'to become thoroughly acquainted
 with'
 PER-NŌSCERE 'to examine thoroughly'
 DIS-PALESCERE 'to spread about, be noised about'
 MACĒSCERE 'to grow lean'
 MISERĒSCERE 'to feel pity'
 LUCĒSCERE 'to shine'
 IRĀSCI 'to be angry'
 169 BC CRĒSCERE 'to grow'
 CO-GNŌSCERE 'to become thoroughly acquainted
 with'
 HORRĒSCERE 'to tremble, shudder'
 NITĒSCERE 'to begin to shine'

- RUSSĒSCERE 'to become red'
 COM-MISERĒSCERE 'to commiserate'
 PUBĒSCERE 'to reach the age of puberty'
 RE-QUIĒSCERE 'to rest, let rest'
 FRONDEĒSCERE 'to become leafy'
 RE-MORBĒSCERE 'to become sick again'
 159 BC RE-VIVĒSCERE 'to come to life again'
 SILĒSCERE 'to become still, silent'
 INTEGRĀSCERE 'to make whole, renew (oneself)'
 QUIĒSCERE 'to rest, keep quiet'
 VESPERĀSCIT 'it becomes evening'

It should be emphasized that the preceding list is only the tip of the iceberg, for a catalog of all the Latin -SC- verbs through the end of the classical period would include hundreds of additional items, enumerated in Blaylock (1975) and cited in Allen (1980). Thus, all of the above verbs are near the top of the complete chronological list of Latin inchoatives.

Although CRESCERE is not the earliest attested verb in the preceding list, it must have been used before the date of first attestation, since few words are invented at the moment of writing. The date simply indicates the earliest identified written record. The important point is that CRESCERE fulfills one significant criterion for a leader verb--namely, it is present at the time of formation of the earliest similar verbs. Moreover, the leader verb is a frequent, early attested verb with the most common variety of the suffix, -ESC-. Although some verbs show different vowels before -SC-, most Latin inchoatives have the -ESC- suffix. Aside from compounds of NOSCŌ 'I learn', where -Ō- precedes -SC-, the Latin inchoative suffixes display vowels in the following proportions (Blaylock 1975: 436):

-ESC- 500 -ISC- 110 -ASC- 70

The most typical source of inchoatives is derivation from adjectives, stative verbs, and stative nouns, as exemplified by the following verbs:

- RUF-ESC-ERE (<RUF-US 'reddish') 'to become reddish'
 LUC-ESC-ERE (<LUC-ERE 'to shine', LUX, LUC-IS 'light')
 'to begin to shine'
 SENT-ISC-ERE (<SENT-IRE 'to feel, perceive') 'to begin
 to perceive'
 TENER-ASC-ERE (<TENER 'tender') 'to grow tender, soft'

If we examine our list of inchoatives attested before 150 BC, we find that 22 out of 35 verbs, or 63%, have the suffix -ESC-. As well as showing agreement in its

suffix, CRĒSCŌ is a simplex verb like 20 of the 35 verbs. Since compounds are in the minority and have a variety of prefixes, a compound verb is less likely to have served as a leader verb.

However, more than one verb meets the criterion of being an early attested simplex verb with the suffix -ĒSC-. We might also cite AUGĒSCŌ 'I grow', first attested in 198 BC, and QUIĒSCŌ 'I rest', which dates from 159 BC, as possible leader verbs. Like CRĒSCŌ, these verbs do not have an inchoative auxiliary in their glosses, but their meanings may be paraphrased as 'I become quiet' and 'I become bigger', which indicate inchoativity. Furthermore, all three verbs have a general meaning that can take a greater variety of subjects than can, for example, such semantically narrow verbs as LIQUĒSCERE 'to become fluid, melt' and LUCĒSCERE 'to begin to shine'. But both QUIĒSCŌ and AUGĒSCŌ can be derived from related words by common processes. It is probable that QUIĒSCŌ 'I rest' was derived from the stative noun QUIĒS 'calm, quiet' and that AUGĒSCŌ came from the stative verb AUGĒŌ 'I grow'. This leaves CRĒSCŌ as the most likely candidate for the original leader verb. Although CRĒSCŌ 'I grow' has the same root as the transitive verb CRE-ĀRE 'to make' and the agentive noun CRE-ĀTOR 'maker', such transitives and agentives are not typical sources for inchoatives. Thus, CRĒSCŌ is more likely to be the leader verb, while QUIĒSCŌ and AUGĒSCŌ are probably derived formations imitating the model verb CRĒSCŌ. Whereas its suffix unites CRĒSCŌ with other verbs containing -ĒSC-, its peculiar links to related words in the lexicon distinguish it from the remaining inchoative verbs.

The morphology of CRĒSCŌ is a strong point of similarity with inchoatives. As mentioned earlier, the -SC- suffix marked the present, but not the perfect, stem. The present stem helped form the imperfective tenses, which express the aspect of a noncompleted action or state. Thus, the present, imperfect, and future are formed from the present stem with -SC-, while the perfect, past perfect, and future perfect lack -SC-:

Present: CRĒ-SC-Ō 'I grow'
 Imperfect: CRĒ-SC-ĒBAM 'I was growing'
 Future: CRĒ-SC-AM 'I will grow'
 Perfect: CRĒ-V-Ī 'I grew'
 Past perfect: CRĒ-V-ERAM 'I had grown'
 Future perfect: CRĒ-V-ERŪ 'I will have grown'

The present stem with -SC- also forms the present subjunctive, the present infinitive, the imperative, the present participle, and the gerund. The root without

-SC- serves to form the perfect passive as well as the perfect active. In abbreviated form, this conjugational information shows up in the principal parts of the verb:

Present indicative: CRĒ-SC-Ō 'I grow'
 Present infinitive: CRĒ-SC-ERE 'to grow'
 Perfect indicative: CRĒ-VĪ 'I grew'
 Perfect participle: CRĒ-TUM 'grown'

In the numerous conjugated forms, the distribution of -SC- in CRĒSCŌ is identical to the inflection of other inchoatives.

Because of such an exact morphological parallel, it is a mistake to be skeptical about our ability to identify CRĒSCŌ as the leader verb. However, Leumann (1963: 314) claims that the model verb from which inchoatives were produced can no longer be found. Deriving inchoatives through the perfect participle, he speculates that N-ĀSCOR 'I am born' and N-ĀTUS 'born' might have provided the model for IR-ĀSCOR 'I am angry' through the perfect participle IR-ĀTUS 'angered, angry', and that QUI-ĒSC-Ō 'I rest' and QUI-ĒTUS 'rested' might be the template for VI-ĒSC-Ō 'I shrink up, wither' by way of VI-ĒTUS 'bent together, shrunken', which is the perfect participle of VI-EŌ 'I bend together, I plait'. Certainly, NĀSCOR 'I am born' and QUIĒSCŌ 'I rest' may have encouraged the derivation of other inchoative verbs, since the presence of several models would make it more likely that new inchoatives would be formed. There is thus a possibility of multiple causation through the influence of other words. Yet it is a mistake to believe that the original inchoative cannot be found or that one verb is as likely as another to have served as the original model. As has been shown, chronological lists from etymological dictionaries and explicit criteria for a leader verb make it possible to identify CR-ĒSC-Ō 'I grow' as the original stimulus for other inchoatives. The basic argument is that the criteria for a leader verb can be abstracted from later verbs coined by the productive derivational process. Furthermore, the method of examining a chronological list by means of criteria taken from the meanings and forms of derived words has general applicability to the history of any suffix. This method can be called extrapolation.

Of course, documentation does not make it absolutely certain that CRĒSCŌ was the leader verb, because the earliest historical records date from a late stage in the development of inchoatives when the suffix was already fully productive. This is proved by the variety of -SC- verbs in the list of the earliest inchoatives. For purposes of historical study, Tagliavini (1949: 150)

divides the -SC- verbs into three groups. The first group consists of those few verbs that have *-sk- reflexes in other Indo-European languages and are thus pre-Latin formations; an example is GN-ŪSC-Ū 'I perceive, I learn', which has the Attic Greek cognate gignō-skō 'I learn'. The second group contains such pre-historic Latin formations as CR-ĒSC-Ō. Like Kent (1946: 110), Tagliavini believes that CRĒSCŌ underwent reanalysis of the root and ending from CRĒ-SC-Ō to CR-ĒSC-Ō, and the new suffix was then used to form many new verbs. Among the verbs of the second group, CRĒSCŌ is the verb that most clearly contains the concepts 'begin' and 'start', and consequently it indicates a change of state, does not signal a termination or perfective idea, and accepts both animate and inanimate subjects. Furthermore, CRĒSCŌ contrasts with another verb having the same root--namely, CRE-ĀRE 'to make'--and this made it easier to factor out the ending -ĒSC-. The third historical group was formed by attaching the inchoative suffix to stative verbs, adjectives, and stative nouns. Examples of the third group and words from which they are derived are:

CAL-ĒSC-Ō 'I become warm' < CAL-EŌ 'I am warm'
 ALB-ĒSC-Ō 'I become white' < ALB-US 'white'
 QUI-ĒSC-Ō 'I rest' < QUIES 'rest, quiet'

Historical texts date only from the period when all three groups of inchoatives were present in Latin, as we have seen from our chronological list. Consequently, it is methodologically necessary to use an analysis like Tagliavini's reconstruction of different stages in the pre-history of the suffix.

There is additional evidence that inchoatives were being produced before the earliest attested Latin, because some of the oldest compound inchoatives show vowel raising in the root. For example, DE-FET-ISC-OR 'I become tired', first attested in 184 BC, is derived from FAT-ISC-OR 'I grow weak', and the root vowel A has been raised to E. Similarly, CON-TIC-ĒSC-Ō 'I become still' is a compound of TAC-EŌ 'I am silent', and the root vowel A has been raised to I. Such prehistoric vowel raising in non-initial syllables is discussed by Palmer (1968: 219-20), who states that the regular development in open syllables was from A to I.

We can adapt a phonological theory to explain the extension of the suffix to form new verbs. Let us first review the facts. Once the morpheme -ĒSC- was separated from CRĒSCŌ, it began to spread. It did not immediately extend to all the roots that eventually formed inchoatives, but, as suggested by the chronological table, it

spread gradually from one lexical item to another. This gradual extension fits the theory of lexical diffusion devised by Wang (1969) and expanded by Chen (1972) to describe the spread of phonological change. The theory of lexical diffusion states that phonological change is phonologically abrupt but lexically gradual. For instance, palatalization of a velar will occur suddenly in an individual phoneme but will spread gradually to more and more words containing the phoneme; moreover, all words having the phoneme do not necessarily undergo the change, which may be blocked by a competing change. Similarly, addition of an inchoative suffix to an individual root occurs suddenly but spreads gradually to other roots, and it may be blocked by the rise of other preferred ways to express the inchoative meaning--such as, periphrastic constructions. For instance, French uses commencer à 'to begin to', and Spanish, empezar a 'to begin to', while the inchoative suffix is not productive in either language. There is an important relationship between the adaptation of the lexical diffusion theory and the claim that you can find a leader verb in morphological change from a chronological list of verbs. That is, since the changes occur incrementally, it is possible by tracing them back to identify, or at least to extrapolate, the original model for change.

In conclusion, it has been shown that CRĒSCŌ was not formed like other -ĒSC- verbs, but that it served as a model or leader verb, since it is the only verb that satisfies the following criteria:

- (1) In syntax, it agrees with inchoatives in its intransitivity and in the acceptability of a variety of animate and inanimate subjects.
- (2) Semantically, it is similar to inchoatives in its imperfective aspect, and it can be paraphrased with the helping verb become.
- (3) Its morphology is identical to the inchoatives in the form of the suffix and in its role in the conjugation.
- (4) Among words in the lexicon, it is a high frequency verb, and other words with the same root are available to facilitate factoring out the root to yield the suffix.

Starting from Malkiel's discussion of leader words, it is useful to develop such criteria, which can be used to find leader words in the history of other affixes after it has been shown that a leader verb serves as a trigger, or mechanism, of morphological change.

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